



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

January 4, 2007

W. Michael Sullivan, Commissioner
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

Re: Review and Action on Water Quality Standards Revisions

Dear Commissioner Sullivan:

By letter of June 23, 2006, the Rhode Island Department of Environmental Management (DEM) submitted an update of its Water Quality Regulations to the Environmental Protection Agency (EPA) for review. The revised regulations were adopted June 21, 2006 with an effective date of July 11, 2006, and included revisions to Rhode Island's surface water quality standards. A copy of the regulations with the revisions clearly identified was later provided to EPA, and the revisions were certified by DEM's Legal Counsel on October 2, 2006 as having been duly adopted pursuant to state law. EPA has completed its review of a number of the revisions as further described below.

I commend DEM for adopting many revisions to its water quality standards that strengthen the ability to protect Rhode Island's waters, such as updating numeric criteria for toxic chemicals and adding several waters to the State's Special Resource Protection Waters list for their ecological significance. Pursuant to Section 303(c)(3) of the Clean Water Act (CWA) and 40 CFR Part 131, I hereby approve the following water quality standards revisions, except as noted:

- ▶ The addition of a Class AA as the new use classification for freshwaters used as public drinking water supplies at Rule 8.B.(1)(a) and Rule 8.D.(2); the deletion of public drinking water supply as a designated use for Class A waters at Rule 8.B.(1)(b); the reclassification of all former Class A waters for which public drinking water supply is an existing use to Class AA at Rule 8.C. and Appendix A; and the change "good aesthetics" to "excellent aesthetics" for Class A waters at Rule 8.B.(1)(b).
- ▶ The addition of a "Closed Safety Zone" notation at Rule 8.B.(2) indicating that while shellfish harvesting in the vicinity of permitted sanitary discharges is restricted in some Class SA waters due to the potential impacts of treatment plant failure, all Class SA criteria (including those for the protection of shellfishing) must be met.
- ▶ The update of the numeric surface water quality criteria for toxic pollutants at Appendix B, as referenced at Rule 8.D.(2)(9) and 8.D.(3)(9), for aquatic life (freshwater and saltwater) and

human health protection. EPA is approving the criteria revisions at Appendix B with the exception of the freshwater and saltwater chronic mercury criteria for the protection of aquatic life, and freshwater acute and chronic xylene criteria for the protection of aquatic life. EPA is not acting on these excepted revisions at this time.

- ▶ The revision to allow the use of hardness values less than 25 mg/l where appropriate in the calculation of hardness-dependent metals criteria for aquatic life protection at Appendix B.
- ▶ The revision from 30Q5 low flow to long term harmonic mean flow for application of the human health criteria for non-carcinogens at Appendix B.
- ▶ Revision of the dissolved oxygen (DO) criteria for saltwaters at Rule 8.D.(3) to be consistent with EPA's CWA Section 304(a) criteria guidance at "Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras, EPA-822-R-00-012, November 2000."
- ▶ The addition of a statement at Rule 18.a. that application of antidegradation and 40 C.F.R. § 131.12(a)(1) to the disposal of dredged or fill material to waters of the state shall follow the 40 C.F.R. Part 230 Section 404(b)(1) guidelines.
- ▶ Reclassification of two waters (waterbody ID numbers RI0008039R-21B and RI0008039R-31B), one from Class B1 and one from Class B, to Class A at Appendix A.
- ▶ Reclassification of two waters (waterbody ID numbers RI0007033E-01B and RI0007033E-01C) from Class SA to Class SA{b} at Appendix A.
- ▶ Reclassification of one water (waterbody ID number RI0007028R-03C) from Class B to Class B1 at Appendix A.
- ▶ Reclassification of one water (waterbody ID number RI0010048L-04) from Class SA to Class A at Appendix A.
- ▶ The addition of five waters to the list of those that are protected as Special Resource Protection Waters (Antidegradation Tier 2.5) at Appendix D.
- ▶ All additional water quality standards revisions identified in the highlighted version of the regulations provided to EPA on October 2, 2006, except for the revisions identified in this letter as remaining under EPA review. While the WQS revisions approved in this group are also important, they are more "housekeeping" in nature. Such revisions include those concerning designated use information at the beginning of Appendix A to retain consistency with revisions to the designated use information in the main text of the rule; the relocation of the narrative maintaining instream flows as necessary to support existing and designated uses from Rule 8.E. to Rule 8.D.(1)(B)(h); and restoring the "except as naturally occurs" provision to the freshwater dissolved oxygen criteria at Rule 8.D.(2) to correct an omission in the 1997 regulations.

EPA's approval of Rhode Island's surface water quality standards revisions does not extend to waters that are within Indian territories and lands. EPA is taking no action to approve or disapprove the State's revisions with respect to those waters at this time. EPA will retain responsibility under Sections 303(c) and 303(d) of the Clean Water Act for those waters.

EPA has determined that the revisions to Rule 9.E Restrictions to New Discharges; Rule 11 Prohibited Discharges; Rule 13 Approvals; Rule 14 Application for Approvals; Rule 15 Procedures for Review of Applications for Orders of Approval and Water Quality Certifications; and Rule 21 Appeals, are not new or revised water quality standards and therefore are not subject to EPA review and action under Section 303(c) of the Clean Water Act.

We are still reviewing the revisions to the bacteria criteria for fecal coliform and enterococci with regard to primary contact recreational/swimming uses at Rule 8.D.(2) 4 and 5, and Rule 8.D.(3) 4, and 5; revisions to Rule 19.E.(1)(a) and (b)i, ii, iii, and iv concerning the potential for future reclassification of specified waters from Class SA to Class SA{b}; reclassification of six waters (waterbody ID numbers RI0007025E-06A, RI0007025E-06C, RI0007027E-05, RI0007032E-01E, RI0010043E-06I, and RI0010031E-02A) from Class SA to Class SB at Appendix A; and revisions to the freshwater and saltwater chronic mercury criteria for the protection of aquatic life, and freshwater acute and chronic xylene criteria for the protection of aquatic life at Appendix B. Therefore we are not taking action with respect to these revisions at this time.

The water quality standards regulation at 40 C.F.R. § 131.6 outlines the minimum elements to be included in a State's submittal of water quality standards for EPA review. Information supporting revisions to the standards is one of those elements, and DEM's submittal was not complete in this regard for some of the revisions where EPA is not taking action at this time. By letter of November 16, 2006 DEM submitted additional information regarding the revisions. EPA will consider this information and will contact your staff if further information is needed to complete our review.

Supporting Discussion of Approvals

Water Quality Criteria

Numeric Water Quality Criteria for Toxic Pollutants

EPA's approval of DEM's revisions to its numeric criteria for toxic chemicals at Appendix B is based on a review of whether the criteria protect the applicable designated uses including a consideration of EPA's ambient water quality criteria guidance published pursuant to Section 304(a) of the CWA. EPA found that the adopted criteria are as protective as the EPA guidance in all cases, and are protective of designated uses for the reasons explained in EPA's guidance. The human health criteria have been calculated using EPA's current recommended fish consumption rate for the general population of 17.5 g/day and a risk level of 1×10^{-5} .

The revision removing the low end hardness cap of 25 mg/l for calculation of hardness-dependent metals criteria at Appendix B is consistent with EPA guidance indicating that where

hardness is below 25 mg/l, actual hardness values should be used to ensure the level of aquatic life protection intended by EPA's criteria guidance (Modifications to Guidance, Site-Specific Criteria - Use of the WER Procedure with Hardness Equations, December 3, 1997). EPA's approval is based on a determination that the revision is protective of designated aquatic life uses for the reasons stated in the guidance.

DEM's adoption of the long term harmonic mean flow for application of criteria for non-carcinogens at Appendix B is also consistent with current EPA guidance, concerning appropriate instream design flows to ensure protection of uses in the application of human health criteria (Revisions to the Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000), 65 FR 66450, November 3, 2000). EPA's approval is based on a determination that the revision is protective of designated uses for the reasons stated in the guidance.

Dissolved Oxygen Criteria

As with the criteria for toxic pollutants, EPA's approval of DEM's revised DO criteria for saltwaters at Rule 8.D.(3) is based on a review of whether the criteria protect the applicable designated uses including a consideration of EPA's ambient water quality criteria guidance published pursuant to Section 304(a) of the CWA. EPA found that the adopted criteria are protective of designated uses for the reasons explained in EPA's guidance (Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras, EPA-822-R-00-012, November 2000). In applying the revised criteria it is important that DEM consider whether any higher DO levels, such as may have been maintained by the former criteria, are necessary to ensure protection of existing aquatic life uses consistent with the antidegradation provisions of Rhode Island's water quality standards.

Use Classifications and Reclassifications

Class AA and Class A

EPA's approval of the new Class AA, the deletion of public drinking water supply as a designated use for Class A, and the reclassification of those former Class A waters for which drinking water supply is an existing use to Class AA is based on a determination that: Class AA includes designated uses consistent with Section 101(a)(2) of the CWA in addition to drinking water supply; Class AA includes criteria that are protective of those uses and as protective as Class A; and, based on DEM's statement in its Responsiveness Summary, June 20, 2006, reclassification of waters from Class A to Class AA ensured that drinking water supply is retained as a designated use for all waters where that use is an existing use.

Class B1 and Class B to Class A

The reclassification of waters from Class B1 and Class B to Class A is consistent with the CWA because the waters' designated use goals continue to be consistent with the uses specified at Section 101(a)(2) of the CWA, and the applicable criteria are either the same or more stringent.

Class B to B1

The same designated uses and criteria applicable to Class B are applicable to waters designated as Class B1. The difference is that DEM uses the B1 designation to identify waters where primary contact recreation might “be impacted due to pathogens from approved wastewater discharges.” In a letter of November 16, 2006 DEM explained that the sanitary wastewater discharge associated with the reclassified water existed prior to the federal date of November 28, 1975 used in the determination of existing uses. EPA’s approval of the reclassification is based on a determination that there is no change to the designated uses and criteria, and there is no impact on existing uses.

Class SA to SA{b}

The same designated uses and criteria applicable to Class SA are applicable to waters designated as Class SA{b}. The difference is that DEM uses the {b} designation to identify waters in the vicinity of marinas and/or mooring fields where seasonal shellfishing closures are likely due to a concentration of vessels, regardless of whether the applicable water quality criteria are met. In its Responsiveness Summary, June 20, 2006, DEM indicated that the marinas/mooring fields and shellfish closures associated with the reclassified waters existed prior to the federal date of November 28, 1975 used in the determination of existing uses. EPA’s approval of the reclassifications is based on a determination that there is no change to the designated uses and criteria, and there is no impact on existing uses.

Class SA to Class A

In a letter of November 16, 2006 DEM explained that salinity data collected by DEM’s Division of Fish and Wildlife showed values of zero ppt, indicating that the water in question, Tunipus Pond (ID number RI0010048L-04), is freshwater and had been incorrectly assigned a saltwater classification. Based on DEM’s explanation, it is EPA’s understanding that the revision corrects an error in classification and there are no existing uses reliant on saltwater to be impacted by this action. Further, Class A includes designated uses consistent with Section 101(a)(2) of the CWA and criteria to protect those uses.

Closed Safety Zones

DEM has added a “footnote,” @, to the SA use classification indicating that some Class SA waters contain “Closed Safety Zones” in the vicinity of approved sanitary discharges where shellfishing may be impacted in the event of treatment failure. Similar to the {b} notation, all designated uses, including shellfish harvesting for direct human consumption, and criteria applicable to Class SA remain applicable. EPA’s approval of the footnote is based on a determination that there is no change to the designated uses or criteria.

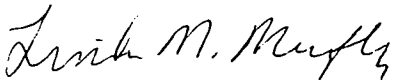
Antidegradation

The statement added at Rule 18.a. concerning the application of antidegradation and 40 C.F.R. § 131.12(a)(1) to the disposal of dredged or fill material is consistent with the federal

antidegradation policy for the reasons presented in "Questions and Answers on Antidegradation," USEPA, August 1985.

We look forward to continued cooperation with Rhode Island in the development, review, and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. Please contact me or either Bill Beckwith (617-918-1544) or Steve Winnett (617-918-1687) of my staff if you have any questions.

Sincerely,



Linda M. Murphy, Director
Office of Ecosystem Protection

cc: Alicia M. Good, DEM
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